

Amendment to the Claims

A complete list of all the presently or formerly pending claims in the application is provided below, with suitable headings to show the status of each claim.

1. (Currently amended) A Hall effect switch comprising:

a switch housing;

a Hall effect sensor positioned inside said switch housing; and

a magnet carriage positioned inside said switch housing, said magnet carriage movable along a first longitudinal axis of the Hall effect switch relative to said Hall effect sensor between a non-actuated position and an actuated position, said magnetic carriage including a first magnet and a second magnet, said first and second magnets facing said Hall effect sensor, being in contact with each other, and each having a respective longitudinal axis that extends generally perpendicular to the first longitudinal axis;

said Hall effect sensor responsive to the positional displacement of said first and second magnets relative to said Hall effect sensor such that said Hall effect switch transitions between ~~an~~ a non-actuated state when the carriage is at its non-actuated position and an actuated state when the magnetic carriage is at its actuated position.

2. (Original) The Hall effect switch of claim 1 further comprising a boot seal between said switch housing and said magnet carriage.

3. (Original) The Hall effect switch of claim 1 further comprising a return spring for biasing the positional displacement of said magnet carriage.

4. (Original) The Hall effect switch of claim 1 further comprising a clicker ball and a clicker ball aperture, said clicker ball being displaced from a non-actuated position to an actuated position by the positional displacement of said magnet carriage and thereby emitting a perceivable clicking indication.

5. (Original) The Hall effect switch of claim 1 wherein said first and second magnets are positioned with opposite polarities facing said Hall effect sensor.

6. (Original) The Hall effect switch of claim 1 further comprising at least one additional magnet in said magnet carriage positioned similarly to said first and second magnets.

7. (Cancelled)

8. (Previously Presented) The Hall effect switch of claim 10 further comprising a boot seal between said switch housing and said magnet carriage.

9. (Previously Presented) The Hall effect switch of claim 10 further comprising a return spring for biasing the positional displacement of said magnet carriage.

10. (Previously Presented) A Hall effect switch comprising:

a switch housing;

a Hall effect sensor positioned inside said switch housing;

a magnet carriage positioned inside said switch housing, said magnet carriage movable relative to said Hall effect sensor and having a first magnet and a second magnet, said first magnet and said second magnet positioned with opposing polarities facing said Hall effect sensor; and

a clicker ball and a clicker ball aperture, said clicker ball being displaced from a non-actuated position to an actuated position by the positional displacement of said magnet carriage and thereby emitting a perceivable clicking indication;

said Hall effect sensor responsive to the positional displacement of said first and second magnets relative to said Hall effect sensor.

11. (Previously Presented) The Hall effect switch of claim 10 wherein said first and second magnets are positioned in contact with each other.

12. (Previously Presented) The Hall effect switch of claim 10 further comprising at least one additional magnet in said magnet carriage positioned similarly to said first and second magnets.

13. (Currently amended) A method for contactless switching in a switch housing including a Hall effect sensor and a magnet carriage, said method comprising:

mechanically displacing a magnet carriage along a first longitudinal axis of the switch housing, the magnet carriage having a first magnet and a second magnet, said first and second magnets positioned with opposite polarities facing a Hall effect sensor, being in contact with one another, and each having a respective longitudinal axis that extends generally perpendicular to the first longitudinal axis;

detecting the change in magnetic field due to the displacement of the first and second magnets of said magnet carriage with said Hall effect sensor; and

actuating said switch based on the change in magnetic field detected by said Hall effect sensor.

14. (Original) The method of claim 13 further comprising sealing said switch housing by using a boot seal between said switch housing and said magnet carriage.

15. (Original) The method of claim 13 further comprising biasing the positional displacement of said magnet carriage using a return spring.

16. (Original) The method of claim 13 further comprising generating a perceivable clicking indication by using a clicker ball and a clicker ball aperture, said clicker ball being displaced from a non-actuated position to an actuated position by the positional displacement of said magnet carriage.

17. (Cancelled)

18. (Original) The method of claim 13 further comprising at least one additional magnet in said magnet carriage positioned similarly to said first and second magnets.